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RESPONSE TO SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL COMMENTS ON DRAFT RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK PLAN ZONE D, ZONE F AND ZONE G CNC CHARLESTON SC

6/13/1996

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COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY
NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA
CTO-029

DRAFT FINAL
RCRA FACILITY INVESTIGATION (RFI)
ZONES D, F, AND G WORK PLAN
RESPONSE TO REGULATORY COMMENTS

Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SOUTH CAROLINA

SOUTHDIV CONTRACT NUMBER: N62467-89-D-0318

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COMMENTS ON DRAFT FINAL ZONES D, F AND G RCRA FACILITY INVESTIGATION (RFI) WORK PLAN BY THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (DHEC) DATED DECEMBER 14, 1995

Comments by: Johnny Tapia

COMMENT:

1. Page 2-22, Table 2-7, describes groundwater as a potential contamination pathway scheduled for sampling. In contrast, the Sampling Plan on page 2-24, Table 2-8, does not show any number of proposed groundwater samples. If data from monitoring wells located at the adjacent Zone E and AOC 613 will be used to determine the need of additional wells for SWMU #175, a footnote explaining such intentions should be included on Table 2-8, so that the apparent discrepancy is clarified.

RESPONSE:

A footnote has been added to Table 2-8 on page 2-24 which reads in essence: Initially, the soil at SWMU 175 will be characterized and the COPCs identified by the proposed soil samples. Based on the nature and extent of the soil contamination found and a review of adjacent Zone E and AOC 613 groundwater analytical results, the need for additional wells to determine the extent of groundwater contamination at SWMU 175 will be evaluated.

COMMENT:

2. Page 2-40, Section 2.7.7, reads:
"Groundwater will be addressed by using the analytical data from four of the shallow monitoring wells and one deep well sampled during the AR investigation at AOC 609." On appendix C, the (Assessment Report) AR for AOC 609 identifies 8 groundwater monitoring wells that were used to collect data for the AR. Section 2.7.7 should be more specific and identify which 4 of the 8 monitoring wells will be used as sources of analytical data for AOC 611. In addition, a footnote should be included on table 2-14 to explain why if groundwater is considered as a potential contamination pathway, no samples are proposed for these media.

RESPONSE:

The analytical data from the existing shallow wells (CNB-1346-MW-7, CNB-1346-MW-3, CNB-1346-MW-4, and CNB-1346-MW-5) and the deep well (CNB-1346-MW-6) will be used to assess the sites' impact on groundwater. This revision can be found on page 2-41. A footnote has been added to Table 2-14, page 2-42 to address the comment.

COMMENT:

3. AOC 641 is described on Table 2-45 as part of the Fuel Distribution System (FDS), but on Appendix A "SWMU/AOC Summary", Table A-1 does not include AOC 641. This discrepancy should be corrected.

RESPONSE:

Table A-1 in Appendix A has been revised to include AOC 641.

COMMENT:

4. Page 2-130, Section 2.23 "Fuel Distribution System" it reads:
"The FDS and associated SWMUs and AOCs are described on Figure 2-24." These figure identifies all but AOC 641.

RESPONSE:

Figure 2-24 has been revised to include AOC 641. Please note the figure number has been changed to 2-25.

COMMENT:

5. On March 11, 1996 the Department was notified about the addition of AOC 706 on Zone G. The site was discovered during sampling for RCRA closure of the Mixed Waste Storage facility, building 246. The site was found to be contaminated with Aroclor 1260. The Department reminds NAVBASE the AOC 706 has to be included in the RFI process and every pertinent information submitted for review.

RESPONSE:

Discussion and pertinent information regarding AOC 706 have been included in Section 2.23 and Section 4.25 of the Final D, F, & G Work Plan. A total of 10 soil sample locations are proposed to determine the extent of soil impacted by the site. The surface water runoff migration pathway will be addressed by the sediment samples associated with AOC 633 and 634. Because of the hydrophobic and adsorptive nature of PCBs, groundwater monitoring wells are not proposed at this time. For readability purposes, the new Sections 2-23 and 4.25 have not been bolded.

ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK PLAN FOR ZONES D, F, AND G

COMMENT:

1. For each SWMU (Solid Waste Management Unit)/AOC (Area of Concern), include a statement about potential ecological receptors in the "Potential Receptors" section. If there is no potential concern for ecological receptors, say so and tell why (e.g., lack of nearby potentially affected habitat; no potential contaminant migration pathway to habitats of concern).

RESPONSE:

Text has been added to each AOC/SWMU to address potential concern for ecological receptors. Reasons for concern, if any, have also been added to the text for each AOC/SWMU.

COMMENT:

2. Page vii, Table 2-10: The footnote is missing.

RESPONSE:

The superscript was inadvertently included on page vii and has been removed.

COMMENT:

3. Page 1-6, and other places: Mention is made of the use of a Laser-Induced Fluorescence (LIF) technology. Elsewhere (e.g., Page 2-131) this technology is referred to as the Site Characterization Analysis Penetrometer System (SCAPS). It is EPA's understanding that this is still an experimental technology which has not been adequately field tested and approved for field use by the American Society for Testing and Materials (ASTM) or EPA as a reliable field method. Pending acceptance as a field tool, EPA does not agree with the use of this technology in the RFI at Naval Base Charleston.

   EPA recommends that the Draft Zones D, F, and G RFI Work Plan be revised to include only methods which have been agreed to by SCDHEC and EPA in the Comprehensive RFI Work Plan.

RESPONSE:

LIF Technology will be replaced with use of Cone Penetrometer Technology (CPT) equipment to collect soil samples at various depths as the initial phase of the

investigation. CPT has been included in the second revision of the Comprehensive Work Plan which has been submitted previously for regulatory review.

COMMENT:

4. Page 1-6: In substance, the statement is made that a focused screening investigation *will be conducted* (future tense) using the Laser Induced Fluorescence technology. However, on Page 2-130, the statement is made that the screening investigation *was conducted in July 1995* (past tense). EPA was surprised to learn in a meeting on April 9, 1996, that this investigation has already been completed and Naval Base Charleston is reviewing the draft report - a report which prior to the April 9, 1996 meeting EPA did not even know existed. This causes EPA several concerns:

   a. Page 1-6 contradicts Page 2-130. Page 1-6 needs to be revised accordingly.

   b. Neither EPA nor the Restoration Advisory Board (RAB) were notified of this investigation before it was conducted nor given the opportunity to have input into the development of the work plan. This is a clear breach of the DOD GUIDANCE ON ESTABLISHING BASE REALIGNMENT AND CLOSURE CLEANUP TEAMS and DOD GUIDANCE ON IMPROVING PUBLIC INVOLVEMENT IN ENVIRONMENTAL CLEANUP AT CLOSING BASES, contained in the Department of Defense BRAC Cleanup Plan (BCP) Guidebook, Appendix B, Fall 1993.

   c. For over three years, EPA has both said and demonstrated on many occasions that EPA will work with Naval Base Charleston in any way possible to "fast-track" the environmental investigation and cleanup at Naval Base Charleston but that all work must be done in accordance with a work plan that has been agreed to by Naval Base Charleston, SCDHEC, and EPA; any work done apart from an approved work plan is done at the Navy's own risk.

RESPONSE:

Page 1-6 referred to the Navy's intention to use LIF technology to conduct the field investigation in conjunction with the implementation of the RFI. Page 2-130 referred to a separate initiative which was undertaken to test the Navy's SCAPS unit at the Charleston site for effectiveness and usefulness in other investigations in this geological setting.

COMMENT:

5. Page 2-1: The statement is made that

> The Charleston Naval Shipyard (CNSY) Radiological Control Office has stated that the sites within Zones D, F, and G do not have a potential for radioactivity based on knowledge of previous NAVBASE operations.

At this time, the statement could be more appropriately made that

> The Charleston Naval Shipyard (CNSY) Radiological Control Office has completed a radiological survey and cleanup and thereby demonstrated the absence of radioactivity at Naval Base Charleston, with the exception of SWMU 2 which is still active. EPA has already submitted a letter to Charleston Naval Shipyard recommending the release from radiological controls all Naval Base Charleston property, except SWMU 2.

RESPONSE:

The statement on page 2-1 has been revised to incorporate the suggested wording by EPA regarding the radiological survey and cleanup.

COMMENT:

6. Page 2-3, Section 2.1: Table 2-1, mentions that AOC 619 currently has buildings and asphalt pavement. Therefore, include more information about the stressed vegetation observed during the October 1995 site visit (i.e., type of vegetation, location, approximate size of the affected area).

RESPONSE:

The text in Section 2.1 and Table 2-1 on page 2-3 have been revised to include a more detailed description of the observed stressed vegetation.

COMMENT:

7. Page 2-3, Table 2-1, SWMU 4: Groundwater needs to be added as a pathway to be sampled.

RESPONSE:

Table 2-1 on page 2-3 has been revised to include groundwater as a pathway to be sampled.

COMMENT:

8. Page 2-3, Section 2.1: A list of the known (or most likely) pesticides used at this facility should be compiled. Samples collected at the wash rack and rinse area of this SWMU should subsequently be analyzed for these also.

RESPONSE:

Section 2.1 has been revised to include pesticides most likely used at this facility. Samples collected in the areas mentioned will be analyzed for the appropriate pesticides. A list of known or most likely used pesticides will be included in the RFI report.

COMMENT:

9. Page 2-5, Section 2.1.6, and throughout the document: The statement is made that:

> Should the proposed collection of the high-quality samples be inadequate to define the areal extent of contamination, if present, then the feasibility of employing screening methods will be reevaluated.

This sentence is open to a number of interpretations, some with which EPA does not agree. It needs to be rewritten in a manner which is not open to more than one interpretation.

RESPONSE:

The sentence in Section 2.1.6, now located on page 2-6, and throughout the document has been rewritten to read:

> However, should the analytical results of the proposed high-quality samples identify contamination that has not been adequately defined by the initial sampling, the feasibility of employing cost-effective screening methods will be re-evaluated. Should screening methods be employed, additional high quality samples will be collected and analyzed to confirm the screening results and to define the nature and extent of contamination detected.

COMMENT:

10. Page 2-7, Section 2.1.7: The proposed soil boring locations should include the areas of stained soil and stressed vegetation. (Page 2-3, Section 2.1). (The text is not clear on this point.)

RESPONSE:

Page 2-7, Section 2.1.7 has been revised to discuss soil boring locations in the areas of stained soil and stressed vegetation.

COMMENT:

11. Page 2-11, Section 2.2.4: Although potential discharge of metals in groundwater to the Cooper River is the most likely ecological concern for SWMU 36 and AOC 620, groundwater data for organic contaminants must also be screened for potential ecological concerns.

RESPONSE:

The groundwater data will also be evaluated to assess the potential risk to ecological concerns from organic contaminants. Please see the bolded change on pages 2-11 and 2-12.

COMMENTS:

12. Page 2-13, Section 2.2.7: For screening purposes and groundwater stabilization parameters, a field calibrated pH meter is sufficient. If past acid spills have affected groundwater pH, additional samples and laboratory based pH measurements will be required.

RESPONSE:

Table 2-4 on page 2-13 has been revised to include a note on field screening for pH that reads:

> All groundwater samples will be field-screened for pH. Should these field measurements indicate abnormal pH, laboratory analysis for pH will be performed on these samples.

COMMENT:

13. Page 2-26, Figure 2-5: This figure indicates that no groundwater sampling will be performed at this SWMU, which is at odds with Table 2-7. Groundwater sampling is needed for this SWMU. If this is planned, but the locations are currently unknown, a note on the figure should explain this.

RESPONSE:

Initially the soil at SWMU 175 will be characterized and COPCs identified by the proposed soil samples. In addition, the groundwater analytical results from the adjacent

Zone E (NBCE-GDF-004 and NBCE-GDF-04D) and AOC 613 (NBCF-613-001, NBCF-613-002, NBCF-613-02D, NBCF-613-003, and CNSY-240-3) monitoring wells will be reviewed for these COPCs. Should this data indicate that suspected groundwater contamination related to SWMU 175 has not been fully delineated, the need for additional wells will be reevaluated. A note has been added to Table 2-8 on page 2-24, to clarify this intent.

COMMENT:

14. Page 2-31, Table 2-10: This table indicates that four sediment samples will be collected for AOC 607, but only three sediment sampling locations are shown in Figure 2-6, Page 2-30. Check this discrepancy.

RESPONSE:

The discrepancy on Figure 2-6 on page 2-30 has been corrected. Four sediment samples will be collected for AOC 607.

COMMENT:

15. Page 2-33, Table 2-11, AOC 609: Groundwater is a pathway that needs to be sampled.

RESPONSE:

Table 2-11 on page 2-33 and text on page 2-37 has been revised to include groundwater as a pathway. Groundwater quality at the site will be assessed using the analytical data from the existing wells at the AOC. Should CPOCs be identified in soil samples that are not included in the groundwater sampling group, additional sample collections, and analysis will be performed.

COMMENT:

16. Page 2-37, AOC 609: It says:

> Four soil borings at locations directly adjacent to the location of the waste oil UST are proposed to assess the nature and extent of soil contamination at AOC 609.

EPA is unable to envision how four closely spaced samples could assess the extent of contamination. The grid based sampling scheme should address extent whereas the

SWMU or AOC specific sampling should address the nature and intensity of contamination.

RESPONSE:

The text on pages 2-36 and 2-37 and Figure 2-7 have been revised. One of the borings will be located directly adjacent to the waste oil UST, to determine the nature and intensity of contamination at the potential source/release area. The three other borings will be located approximately 25 feet from the UST to assess the extent of soil contamination related to the waste oil UST at AOC 609.

COMMENT:

17. Page 2-53, Figure 2-10: Groundwater monitoring is needed at this AOC.

RESPONSE:

Because activities related to this AOC ceased in 1977 and no releases have been documented, the CSI proposed for this site is designed to identify potential soil COPCs. If significant soil contamination is detected, groundwater monitoring wells will be installed to assess that potential pathway. Text has been added to Section 2.9 on pages 2.50 and 2.53 to more accurately describe the site conditions and clarify why groundwater monitoring is not proposed at this time.

COMMENT:

18. Page 2-68, Table 2-24, AOC 633: If no grid-based sampling points exist between Building 451-C and AEC-IV-1 in the open field, additional sampling points should be placed here. PCBs are transported by surface runoff and these additional sampling locations would address this possibility.

RESPONSE:

The text of page 2-68 has been revised. A total of six sediment samples, located in the drainage area, are proposed to assess the impact on this area from AOC 633, 634, and 706. Two of these samples are located in the drainage area directly south of AOC 633.

COMMENT:

19. Page 2-60, Figure 2-12: Groundwater monitoring is needed at this AOC.

RESPONSE:

Because of the limited operational time of this facility (1962-1967), and its designation as a CSI, only soil sampling has been proposed. Should significant soil contamination related to former site activities be identified, the need for a groundwater investigation will be evaluated.

COMMENT:

20. Page 2-67, Section 2.12.7: For clarity, mention that all six sediment sampling locations for AOC 633 are shown on Page 2-73, Figure 2-14.

RESPONSE:

Section 2.12.7, Page 2-68 has been revised to clarify the locations of the six sediment samples for AOC 633.

COMMENT:

21. Page 2-78, Figure 2-15: Samples collected at this AOC must be analyzed for the high explosives and propellants believed to be disposed there.

RESPONSE:

AOC 638 was a torpedo workshop; file information does not suggest or support disposal of ordnance at this site. The samples will be analyzed for propellant constituents.

COMMENT:

22. Page 2-79, Section 2.15: Indicate the type of surface in the current parking lot at AOC 642 (i.e., asphalt or cement pavement, gravel, dirt, grass).

RESPONSE:

Section 2.15, page 2-80 has been revised to include a description of the paved parking area at AOC 642.

COMMENT:

23. Page 2-79, AOC 642: This AOC was operated as a pistol range during the 1940's. The description is scant. Is the area now paved? Has grass grown? Is lead shot visible on the surface? Details should be added to the site description.

RESPONSE:

The site description of AOC 642 on page 2-80 has been revised. A more detailed description of observed site conditions has been included.

COMMENT:

24. Page 2-87, AOCs 636 and 637: Because torpedo storage occurred here, it would be prudent to consider Special Analytical Services (SAS) to detect the toxic compounds used in torpedoes, e.g. RDX, Ottofuel, etc. Historical details of torpedo disposal practices should be used to determine which samples are sent for SAS.

RESPONSE:

Historical data are inconclusive regarding locations of disposal. Therefore, the nine soil sample locations associated with AOC 636 will be analyzed for high explosives and propellants. This revision can be found in Table 2-32 on page 2-91.

COMMENT:

25. Page 2-92, Figure 2-17: Samples collected at AOC 636 must be analyzed for the HE and propellants believed to be disposed there.

RESPONSE:

The nine soil sample locations associated with AOC 636 will be analyzed for high explosives and propellants. This revision can be found on Table 2-32 on page 2-91.

COMMENT:

26. Page 2-111, Section 2.20: A list of the known (or most likely) pesticides used at this facility should be compiled. Samples collected from this SWMU should subsequently be analyzed for these also.

RESPONSE:

Section 2-20, page 2-112, has been revised to include pesticides likely used at this facility. Samples collected at this SWMU will be analyzed for the appropriate pesticides. A list of known or most likely used pesticides will be included in the RFI report.

COMMENT:

27. Page 2-119, SWMU 7: It says:

> Generally low concentrations of PCBs and pesticides were detected. PCB concentrations ranged from nondetect to a maximum of 62 μg/gm.

62 μg/g is considered a high concentration of PCBs and the two sentences seem illogical. They should be rewritten. In addition, the abbreviation of "gram" is "g" not "gm."

RESPONSE:

The statement on page 2-120 has been rewritten to more accurately describe the detection and the abbreviation has been revised.

COMMENT:

28. Page 2-135: The text indicates that direct push technology would be used to sample at depths up to 35 feet below ground surface. Is this possible at a coastal location such as Charleston? How will the presence of groundwater at these depths alter the detection of petroleum products? These points should be made clear in the text.

RESPONSE:

The deeper push sample or CPT locations are designed to sample in the pipeline trenches. The disturbed backfill material in these trenches is expected to be penetrable by the proposed Cone Penetrometer Rig. The use of Laser Induced Fluorescence for detection of petroleum has been replaced with soil sampling and standard analytical methods. The text has been revised to clarify this change.

COMMENT:

29. Page 2-137, Section 2.23.7: Figure 2-24 shows storm drains in the vicinity of tanks located at AOC 629 (POL Unloading Facility). Will these and other storm drains along the Fuel Distribution System be sampled, or will such sampling depend upon the outcome of the screening investigation?

RESPONSE:

There is no specific intent to investigate the sewers in conjunction with the FDS investigation. The storm sewers associated with the FDS are being investigated as part of the utilities investigation in Zone L.

COMMENT:

30. Page 3-1, Systematic Sampling Plan: It says:

> The preliminary understanding of groundwater flow direction indicates that most of the proposed grid-based wells are downgradient of many contaminant sources. They most often will be used as reference wells to help delineate the extent of contaminant migration or to detect any point sources that the RFA process has not documented.

EPA has difficulty with the choice of the word "reference." There is the possibility that these wells could be considered to be background from the use of the word. Clearly, this would be a wrong inference. Another word should be chosen. Perhaps they should be called "delineation" wells.

RESPONSE:

Section 3.0 on page 3-1 has been rewritten. The word "reference" used to describe the gridbased wells, has been changed to "delineation".

COMMENT:

31. Page 6-1: The 1996, rather than the 1994, Draft Environmental Baseline Survey should be cited.

RESPONSE:

Page 6-1 has been revised. The 1996 Draft Final Environment Baseline Survey has been cited.